UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,649	11/09/2001	Jeffrey Oliver	100.338US01	7338

34206	7590	08/26/2005	

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EXAMINER
SHIN, KYUNG H

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	10/008,649	OLIVER ET AL.
	Examiner	**Art Unit**	
	Kyung H Shin	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 November 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 November 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *3/24/03*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1.   This action is responding to application papers filed 6/10/2005.

2.   Claims **1 - 24** are pending. Claims **1, 3, 6, 7, 8, 10, 11, 14, 16** have been

amended. Claims **17 - 24** are new. Independent claims are **1, 3, 6, 7, 8, 10, 11, 14, 16**.

Response to Arguments

3.   Applicant's arguments with respect to claims 1-24 have been considered but are

moot in view of the new ground(s) of rejection.

   3.1   Applicant argues that the referenced prior art does not disclose the plurality of

       one type of module (i.e. application, operational, functional) are adapted to be

       modified without affecting operation of the plurality of another type of module (i.e.

       application, operational, functional).   In addition, the applicant argues that the

       referenced prior art does not disclose modification to a respective module without

       affecting operation of the system. Miller discloses the capability to enable

       modifications to a particular type of module (i.e. application, operational,

       functional) without affecting the remaining set of modules.   (see Miller col. 12,

       lines 39-45: modules (i.e. applications, operational, functional) are functionally

       independent, modifications to an operational module has no affect on the other

       type of modules or the system)

   3.2   In reply to an obviousness rejection under 35 U.S.C. § 103, applicant argues that

       the Miller reference and Parker reference combination is not allowed due to

nonobviousness or a lack of motivation for combination.

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Furthermore, in response to applicant's arguments against the reference individually, one cannot show nonobviousness by attacking references individually where rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claim Rejection - 35 USC § 102

The text of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 1 - 11, 13, 16** are rejected under 35 U.S.C. 102(e) as being anticipated by Miller (US Patent No. 5,511,067).

Regarding Claim 1 (Currently Amended), Miller discloses an architecture for a

telecommunications device (see Miller col. 1, lines 7-10: telecommunications system),

comprising:

    a) a plurality of operational modules; (see Miller col. 12, lines 43-45; col. 21, lines

       45-48: multiple support (operational) modules for applications) and

    b) a plurality of application interfaces (API), each API providing functionality for one

       of the plurality of operational modules, wherein each API is broadly defined to

       allow operation of multiple driver sets depending upon a desired driver for the

       system. (see Miller col. 12, lines 39-45: operational modules for applications;

       modules controlled by drivers)

    c) <u>wherein the plurality of operational modules are adapted to be modified without</u>

       <u>affecting the operation of the plurality of application interfaces.</u>   (see Miller col.

       12, lines 39-45: applications, operational modules are functionally independent,

       modifications to operational module has no affect on application or other

       modules)

Regarding Claim 2, 5, Miller discloses the architecture of claims 1, 3, wherein at least

one of the plurality of interfaces supports a plurality of different drivers, and wherein the

at least one of the plurality of interfaces comprises:

    a) a first portion of information common to each of the plurality of different drivers;

       (see Miller col. 14, lines 34-37: information common to device driver) and

    b) a second portion of information specific to one of the plurality of different drivers.

       (see Miller col. 18, lines 9-18: information specific to particular device driver)

Regarding Claim 3 (Currently Amended), Miller discloses an architecture for a

telecommunications transport device, comprising:

a) an application layer; (see Miller col. 12, lines 39-41: types of application layers)

b) a framework layer; (see Miller col. 13, lines 31-37: control (framework) layer)

c) a hardware driver layer; (see Miller col. 12, lines 43-45: device (hardware) driver

layer) and

d) a plurality of interfaces, an interface between each layer and each other layer,

the plurality of interfaces providing interaction between the layers. (see Miller col.

11, lines 24-27: interface between each layer controlled by transfer of messaging

data and user data)

e) <u>wherein the architecture is adapted to be modified without affecting operation of</u>

<u>the device.</u> (see Miller col. 12, lines 39-45: modules are functionally independent,

modifications to one set of modules has no affect on operation of driver module)

Regarding Claim 4, Miller discloses the architecture of claim 3, wherein each of the

plurality of interfaces supports a broadly defined set of operations within a predefined

category of operations. (see Miller col. 14, lines 3-10: forward and reverse (categories)

application layers)

Regarding Claim 6 (Currently Amended), Miller discloses an architecture for a

telecommunications device, comprising:

a) an application layer; (see Miller col. 12, lines 39-41: types of application layers)

b) a framework layer; (see Miller col. 13, lines 31-37: control (framework) layer) and

c) a hardware layer (see Miller col. 12, lines 43-45: device (hardware) driver layer),

the layers connected through a plurality of interfaces between each layer and

each other layer, (see Miller col. 11, lines 24-27: interface between each layer for

control by transfer of messaging data and user data) wherein the architecture

further comprises:

d) a plurality of modules, each module capable of performing a function of the

system. (see Miller col. 10, line 66 - col. 11, line 2; col. 21, lines 45-48: each layer

capable of multiple functions)

e) wherein the plurality of modules are adapted to be modified without affecting

operation of the plurality of interfaces. (see Miller col. 12, lines 39-45: modules

are functionally independent, modifications to one set of modules (i.e. functional,

operational) has no affect on operation of another set of modules)

Regarding Claim 7 (Currently Amended), Miller discloses a modular architecture for a

telecommunications system, comprising:

a) a plurality of function modules, each function module supported by a driver set;

and a plurality of application interfaces, each application interface broadly

defined to support the driver set for its respective function module. (see Miller col.

10, line 66 - col. 11, line 2; col. 12, lines 41-45; col. 18, lines 9-12: applications -

multiple functions - drivers)

b) wherein the plurality of function modules are adapted to be modified without

affecting operation of the plurality of application interfaces. (see Miller col. 12,

lines 39-45: applications, function modules are functionally independent,

modifications to functional module has no affect on application modules)

Regarding Claim 8 (Currently Amended), Miller discloses a method for defining a

telecommunications system architecture, comprising:

a) defining a plurality of driver sets, a driver set for each of a plurality of functions of

the system, each of the plurality of driver sets supporting at least one driver for a

respective function module; (see Miller col. 17, lines 58-60: set of drivers)

b) selecting a subset of the plurality of system functions; (see Miller col. 17, line 58 -

col. 18, line 8: specific driver for specific function) and

c) applying one of the at least one driver of each driver set to its respective function

module through an application interface layer between the driver and the function

module. (see Miller col. 18, lines 12-18: interface applications to drivers)

d) <u>modifying the respective function module without affecting the operation of the</u>

<u>system.</u> (see Miller col. 12, lines 39-45: modules are functionally independent,

modifications to functional module has no affect on operation of system)

Regarding Claim 9, Miller discloses the method of claim 8, and further comprising:

changing the driver applied to a function module without changing the application

interface. (see Miller col. 14, lines 3-8: forward application layer, multiple functions,

specific driver for each function)

Regarding Claim 10 (Currently Amended), Miller discloses a method of making

configuration changes in a telecommunications system, comprising:

    a) defining a plurality of application interfaces, each application interface facilitating

       communication between a driver set and a function module of the system,

       wherein each of the application interfaces supports a broadly defined set of

       operations within a predefined category of operations for a function module; (see

       Miller col. 13, line 63 - col. 14, line 10: application functions completed by

       drivers)

    b) selecting a driver from the driver set for each of the function modules; (see Miller

       col. 17, line 58 - col. 18, line 8: specific driver for specific function) and

    c) applying the selected driver to its respective function module through its

       respective application interface. (see Miller col. 18, lines 12-18: application

       interface to drivers)

    d) <u>modifying the function module without affecting operation of the system.</u> (see

       Miller col. 12, lines 39-45: modules are functionally independent, modifications to

       functional module has no affect on operation of system)

Regarding Claim 11 (Currently Amended), Miller discloses a method of operating

telecommunications system, comprising:

    a) defining a plurality of application interfaces, each application interface providing

       an interface between a driver module and the system; (see Miller col. 18, lines

       12-18: interface applications to drivers)

b) applying one of a set of drivers to each of the plurality of application interfaces depending upon a predetermined driver need. (see Miller col. 17, line 58 - col. 18, line 8: specific driver for specific function) <u>and</u>

c) <u>modifying the driver module without affecting the operation of the system.</u> (see Miller col. 12, lines 39-45: modules are functionally independent, modifications to driver module has no affect on operation of system)

Regarding Claim 13, Miller discloses the method of operating a telecommunications system of claim 11, wherein defining further comprises:

a) generating a set of common instructions for each of the drivers in the set of drivers, the common instructions applicable to each of the drivers of the set of drivers; (see Miller col. 14, lines 34-37: information common to device driver) and

b) generating a plurality of sets of non-common instructions, a set of non-common instructions for each of the drivers in the set of drivers. (see Miller col. 18, lines 9-18: information specific to particular device driver)

Regarding Claim 16 (Currently Amended), Miller discloses a method of communicating between a plurality of individual modules in a telecommunications system, comprising:

a) defining a driver layer containing a plurality of drivers for a plurality of system modules, wherein each of the system modules performs a specific system operation; (see Miller col. 12, lines 39-45: operational modules for applications; modules controlled by drivers)

b) defining a plurality of application interfaces, an application interface between one of the plurality of drivers in the driver layer of the system and one of the system modules, each application interface defined to support a predetermined set of system functions. (see Miller col. 18, lines 12-18: application interface to drivers)

c) modifying at least one of the system modules without affecting the operation of the system. (see Miller col. 12, lines 39-45: modules are functionally independent, modifications to system module has no affect on operation of system)

Claim Rejection - 35 USC § 103

5. **Claims 12, 14, 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Parker (US Patent No. 5,822,520).

Regarding Claim 12, Miller discloses a telecommunications system. (see Miller col. 1, lines 7-10: telecommunication system)   Miller does not specifically disclose operation of lower layers transparent to higher layer from a user perspective.   However, Parker discloses the system of claim 11, wherein applying one of a set of drivers is seamless to a user of the system. (see Parker col. 5, lines 27-35; col. 5, lines 40-43: operations in lower (device) layers within ISO model are transparent to higher (application) layer)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miller to perform transparent communications between

higher and lower communication protocol layers as taught by Parker. One of ordinary skill in the art would be motivated to employ Parker in order to quickly and efficiently generate network packets in the development of network communications tools. (see Parker col. 2, lines 42-46: " ... *provides a method for quickly and efficiently generating packets ... thereby facilitating the development of network communications tools ...* ")

Regarding Claim 14, Miller discloses a telecommunications system. (see Miller col. 1, lines 7-10: telecommunication system) for causing a computer to perform a method comprising:

a) defining a plurality of application interfaces, each application interface providing an interface between a driver module and the system; (see Miller col. 18, lines 12-18: application interface to drivers) and

b) applying one of a set of drivers to each of the plurality of application interfaces depending upon a predetermined driver need. (see Miller col. 17, line 58 - col. 18, lines 8: specific driver for specific function)

c) <u>modifying the driver without affecting the operation of the system.</u> (see Miller col. 12, lines 39-45: modules are functionally independent, modifications to functional module has no affect on operation of system)

Miller does not specifically disclose the operation of a multiple layered network telecommunications system utilizing a machine readable medium. However, Parker discloses a machine readable medium having machine readable instructions. (see Parker col. 4, lines 47-64: machine readable

medium)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miller to perform transparent communications utilizing machine readable medium between higher and lower communication protocol layers as taught by Parker. One of ordinary skill in the art would be motivated to employ Parker in order to quickly and efficiently generate network packets for development network communications tools. (see Parker col. 2, lines 42-46)

Regarding Claim 15, Miller discloses a telecommunications system. (see Miller col. 1, lines 7-10: telecommunication system) Miller does not specifically disclose the operation via a machine readable medium of communications between lower and higher layers being transparent to a user. However, Parker discloses the machine readable medium of claim 14, wherein applying one of a set of drivers is seamless to a user of the system. (see Parker col. 4, lines 47-64; col. 5, lines 27-35; col. 5, lines 40-43: ISO layered communications)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miller to perform transparent communications between higher and lower communication protocol layers as taught by Parker. One of ordinary skill in the art would be motivated to employ Parker in order to quickly and efficiently generate network packets for development network communications tools. (see Parker col. 2, lines 42-46)

6.　**Claims 17 - 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Miller in view of Filip et al. (US Patent No. 5,414,812).

Regarding Claim 17 (New), Filip discloses the architecture of claim 1, wherein the

modified operational modules are modified by one or more of expansion, deletion, and

replacement of at least one of the plurality of operational modules. (see Filip col. 4,

lines 24-27; col. 4, lines 30-33; col. 3, lines 58-47: layered communications structure,

update (i.e. delete) object (i.e. module) capability)

　　　It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Miller to enable management of a network layered object

oriented (i.e. application, operational, functional objects or modules) environment and

the capability to delete objects (i.e. modules) as taught by Filip. One of ordinary skill in

the art would be motivated to employ Filip in order to efficiently manage a objected

based layered network utilizing a set of rules for the successful management of that OSI

layered network. (see Filip col. 3, lines 19-24: " ... *provide an object-oriented,*

hierarchical model of an OSI network wherein a set of rules for entering and maintaining

a configuration database preserves the hierarchy and interrelationship between the

layers and the functions defined therein ... ")

Regarding Claim 18 (New), Filip discloses the architecture of claim 6, wherein the

modified modules are modified by one or more of expansion, deletion, and replacement

of at least one of the plurality of modules. (see Filip col. 4, lines 24-27; col. 4, lines 30-33; col. 3, lines 58-47: layered communications structure, update (i.e. delete) object (i.e. module) capability)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miller to enable management of a network layered object oriented (i.e. application, operational, functional objects or modules) environment and the capability to delete objects (i.e. modules) as taught by Filip. One of ordinary skill in the art would be motivated to employ Filip in order to efficiently manage a objected based layered network utilizing a set of rules for the successful management of that OSI layered network. (see Filip col. 3, lines 19-24)

Regarding Claims 19 (New), **20** (New), **21** (New), Filip discloses the modular architecture and method of claims 7, 8, 10, wherein the modified function modules are modified by one or more of expansion, deletion, and replacement of at least one of the plurality of function modules. (see Filip col. 4, lines 24-27; col. 4, lines 30-33; col. 3, lines 58-47: layered communications structure, update (i.e. delete) object (i.e. module) capability)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miller to enable management of a network layered object oriented (i.e. application, operational, functional objects or modules) environment and the capability to delete objects (i.e. modules) as taught by Filip. One of ordinary skill in the art would be motivated to employ Filip in order to efficiently manage a objected

based layered network utilizing a set of rules for the successful management of that OSI

layered network. (see Filip col. 3, lines 19-24)

Regarding Claims 22 (New), **23** (New), Filip discloses the method of claims 11, 14,

wherein the modified driver module is modified by one or more of expansion, deletion,

and replacement of the driver module. (see Filip col. 4, lines 24-27; col. 4, lines 30-33;

col. 3, lines 58-47: layered communications structure, update (i.e. delete) object (i.e.

module) capability)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Miller to enable management of a network layered object

oriented (i.e. application, operational, functional objects or modules) environment and

the capability to delete objects (i.e. modules) as taught by Filip. One of ordinary skill in

the art would be motivated to employ Filip in order to efficiently manage a objected

based layered network utilizing a set of rules for the successful management of that OSI

layered network. (see Filip col. 3, lines 19-24)

Regarding Claim 24 (New), Filip discloses the method of claim 16, wherein the at least

one of the modified system modules is modified by one or more of expansion, deletion,

and replacement of at least one of the system modules. (see Filip col. 4, lines 24-27;

col. 4, lines 30-33; col. 3, lines 58-47: layered communications structure, update (i.e.

delete) object (i.e. module) capability)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Miller to enable management of a network layered object

oriented (i.e. application, operational, functional objects or modules) environment and

the capability to delete objects (i.e. modules) as taught by Filip. One of ordinary skill in

the art would be motivated to employ Filip in order to efficiently manage a objected

based layered network utilizing a set of rules for the successful management of that OSI

layered network. (see Filip col. 3, lines 19-24)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

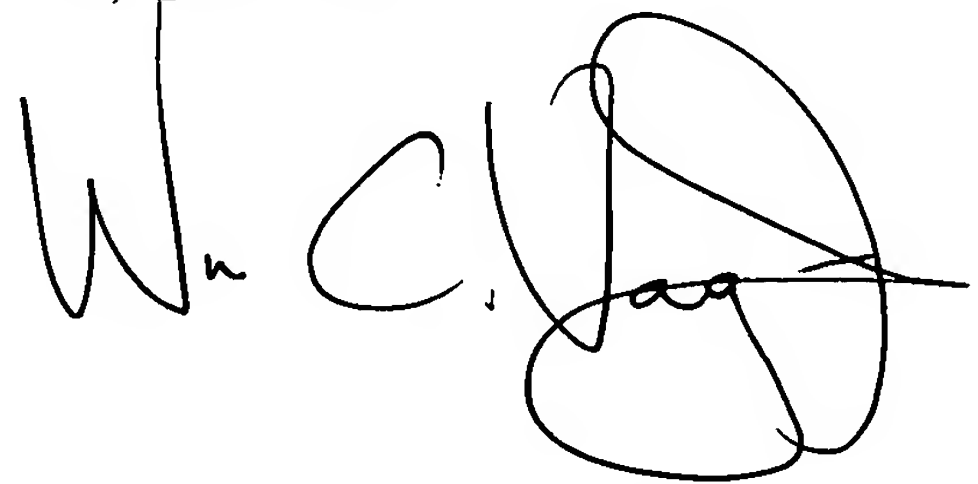than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 9 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KHS
Kyung H Shin
Patent Examiner
Art Unit 2143

KHS
August 16, 2005

WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER